Scaling-up energy efficiency investment in buildings

Part of the Investor Confidence Project Europe
Presentation for UK stakeholders
17 June, 2015
Agenda

• Introduction
• UK market need and current status
• How the Investor Confidence Project will help
• Energy performance protocols
• How you can get involved
• Questions and answers
If you have questions during the webinar

- Please click the “chat” button at the top of the screen, in the Join.me control panel:

- Please address your questions to “@Verco Moderator”, not “@All”

- Questions will be answered at the end of the webinar

- This presentation is being recorded and will be posted at europe.eeperformance.org and emailed to registrants
Introduction
Verco

• We advise government on policy design and work with major organisations to deliver their energy strategies

• Energy and resource management and software development

• 25-year track record

• End-to-end service to major organisations from corporate strategy to project implementation

• Blend of technical and commercial skills
UK market need and current status
Market context

- UK homes and places of work are some of the oldest and most traditionally constructed buildings in Europe

- Approximately 1.8 million non-domestic premises and 5.6 million flats in the UK (lowest in Europe excluding Ireland and Norway)

- Energy efficiency has become a political priority due to energy prices and fuel security concerns

- There is over 80 TWh of outstanding cost-effective energy efficiency potential in this sector, mainly in non-domestic buildings

- UK energy efficiency market is worth more than £18 billion annually, and employs 136,000 people
Legacy of historic building stock

Figure 1: Age profile of UK housing\(^3\)

- Pre 1919: 20%
- 1919-1980: 57%
- 1980-1995: 13%
- Post 1995: 10%

Source: Housing Surveys

Figure 3: Age of non-domestic buildings by build period

- Pre 1940: 31%
- 1940 - 1985: 46%
- 1985 onwards: 23%

Source: Building Research Establishment\(^7\)

UK market trends

• Minimum Energy Performance Standards affecting worst performing stock from 2018

• Green Deal policy designed to provide financed retrofit works (additional incentives required)

• UK Green Investment Bank providing lending for energy efficiency programmes through specialist fund managers

• Growth of national and regional refurbishment programmes

• Energy Savings Opportunity Scheme (ESOS) requiring mandatory audits for large businesses by 5th December 2015
Performance of UK non-domestic buildings

Figure 4: Distribution of Energy Performance Certificate ratings by building sector: 2008 - 2013

Policies for non-domestic refurbishment cycle

How the Investor Confidence Project will help
Status report on energy efficiency financing

• Scale of market *potential* recognised ✔
• Co-benefits increasingly recognised ✔ ✔
• Growing interest from institutional investors ✔
• Slow development of the EE financing market – leading to frustration ✗

[Logo: INVESTOR CONFIDENCE PROJECT]
A healthy energy efficiency market would have:

- Strong demand by owners and investors
- Highly skilled and accredited workforce
- A mix of financing products at attractive rates
- Standardised tools for tracking and quantifying savings
- Active secondary market
The energy efficiency capital gap

Projects
- Untapped market opportunity
- Healthy returns
- Established industry
- Excess capacity

Investors
- Search for yield
- Risk/Return
- Growing emphasis on Impact Investing
- Growing interest in EE
Outcomes

Increase deal-flow

• Increase confidence in savings
• Reduce transaction costs
• Streamline origination process

Reduce risk and cost

• Develop data to manage performance
• Attract project finance investors
• Enable portfolios and securitisation
• Reduce cost of capital
Energy financing – the future

Standardised
Mainstream
Large volume
Multiple sources

Standardised
Mainstream
Large volume
Multiple sources

NOT standardised
NOT mainstream
SMALL volume
FEW sources
Energy financing – the future

- Standardised Mainstream
- Large volume
- Multiple sources

- Standardised Mainstream
- Large volume
- Multiple sources

- Standardised Mainstream
- Large volume
- Multiple sources
## Benefitting all stakeholders

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<th>Financial markets</th>
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<td>Ensure performance risk is managed</td>
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<td>Access competitive financing</td>
<td>Create large pools of conforming projects</td>
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<td>Connect projects to capital</td>
<td>Underwrite performance risk</td>
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<td>Manage performance risk</td>
<td>Reduce transaction time and costs</td>
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<td>Increase deal flow by accessing channels</td>
<td>Common project taxonomy that crosses platforms</td>
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<td>Reduce engineering transaction costs</td>
<td>Help customers connect projects to investors</td>
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<th>Utilities / Capacity markets</th>
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<td>Meet capacity and regulatory requirements</td>
<td>Link efforts to a marketplace of investors</td>
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<td>Manage EM&amp;V risk</td>
<td>Develop a national market with common standards</td>
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Timeline

CREATE TOOLS
- Protocols
- Accreditation
- Labels
- Open data

TAKE TOOLS TO MARKET
- Private investors
- Public programmes
- Developers
- Property owners
- Utilities

BE A CATALYST FOR CHANGE
- Inspire action
- Connect projects to capital
- Create working examples

2015

2016

2017
Energy performance protocols
Lack of Standardisation = Greater risk
ICP Energy Performance Protocols

Baselining
- Existing Building
- Drawings
- Weather File
- Energy Usage
- Energy Rates
- Occupancy

Savings Projections
- Model File
- Calibration Data
- Bid Packages
- Certifications

Design, Construction, Commissioning
- Cx Plan
- Cx Authority
- Test Procedures
- Facilities Req.

Operations, Maintenance, Monitoring
- BMS Points
- Fault Plan
- Maintenance Plan

Measurement & Verification (M&V)
- M&V Model
- Regression Model
- Adjustments
- Impact
- Baseline Adjustments
Protocols under development

- **Large non-domestic**
  - Project capex > €1m, whole building retrofit

- **Standard non-domestic**
  - Project capex < €1m, whole building retrofit

- **Targeted non-domestic**
  - Single or limited number of EE measures

- **Large apartment**

- **Standard apartment**

- **Targeted apartment**
ICP Energy Performance Protocol

Protocols do NOT:
• Invent new standards
• Attempt to impose national standards in another country
• Restrict engineering solutions
• Define a set level of energy savings
How you can get involved
European Ally Network Members
European Ally Network Members

If you are not here you should be.
Became an Ally!
http://europe.eeperformance.org/join-icp-europe

Or Google “ICP Europe Ally”
ICP Europe Technical Forum

Market leaders provide input into the development of the protocols

- Financiers
- Building owner groups
- Developers, installers, ESCOs
- Government agencies
- Utilities
ICP Europe Technical Forum

Join the Technical Forum!

[Website Link]

europe.eeperformance.org/technical-forum

Google “ICP Europe Technical”
How you can get involved

Join ICP Europe Technical Forum
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Become an ICP Europe Ally
Google “ICP Europe Ally”
Sign up for updates

europe.eeperformance.org
Thanks for listening

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